Ministry for Primary Industries
Manatū Ahu Matua

Apiculture

MINISTRY FOR PRIMARY INDUSTRIES
2019 APICULTURE MONITORING PROGRAMME

New Zealand Government

KEY POINTS

- The 2018/19 season produced an estimated honey crop of 23,000 tonnes, an increase of 3,000 tonnes (15 percent) on the prior year, driven by an increase in hive numbers (up 4 percent) and an increase in the national average honey yield per hive (up 10 percent).
- Good rewarewa and clover honey crops boosted hive yields in the North Island to 22.3 kilograms, partially offsetting the average to slightly below average yields from mānuka. Beekeepers in the South Island achieved an average hive yield of 33.4 kilograms for the 2018/19 season, helped by good crops of clover and honeydew honeys.
- The number of registered hives reached 918,026 in June 2019, an increase of 36,841 hives (4 percent) on the prior year. Strong market demand for monofloral mānuka honey is still driving an increase in hive numbers.
- The number of registered beekeeping enterprises increased by 8 percent to 9,282. This increase mostly occurred in the hobbyist and semi-commercial categories. The number of "mega commercial" beekeeping enterprises (more than 3,000 hives) remained the same at 49.
- Average honey prices paid to New Zealand beekeepers in 2018/19 (often referred to as bulk honey prices) fell significantly for most honey types apart from monofloral mānuka honey.
- The value of New Zealand's pure honey exports increased by 2 percent in 2018/19 to $355 million, with higher export prices (up 10 percent) compensating for the drop in export volume (down 7 percent).
- New Zealand exported 4,587 tonnes of pure honey in the six month period between July and December 2019, with 52 percent (2,369 tonnes) being monofloral mānuka honey. The average export price for monofloral mānuka honey was $54.67 per kilogram compared with $20.46 per kilogram for non-mānuka honey.
- Note that this report covers the 2018/19 beekeeping season from July 2018 to June 2019. Reporting on the impacts of COVID-19 on beekeeping activities and on New Zealand honey exports during 2020 will be included in the 2020 Apiculture Monitoring report.

TABLE 1: KEY PARAMETERS OF THE NEW ZEALAND APICULTURE INDUSTRY, 2013 TO 2019

YEAR ENDED 30 JUNE		2013	2014	2015	2016	2017	2018	2019
Beekeeper and hive numbers								
Number of registered beekeeping enterprises[1]		4,279	4,814	5,551	6,735	7,814	8,552	9,282
Number of registered bee hives[1]		452,018	507,247	575,872	684,046	795,578	881,185	918,026
Honey production								
New Zealand annual honey production	Tonnes	17,825	17,610	19,710	19,885	14,855	20,000	23,000
Honey yield per hive	kg/hive	39.4	34.7	34.2	29.1	18.7	22.7	25.1
Honey prices[2]								
Bulk honey price range for light clover honey	NZ$/kg	5.00-7.30	5.50-8.30	7.00-10.75	9.50-13.00	10.00-14.00	8.50-12.00	5.00-9.25
Bulk honey price range for mānuka honey[3]	NZ$/kg	10.45-60.00	8.00-85.00	9.50-116.50	12.00-148.00	10.80-127.00	12.00-135.00	5.00-125.00
Honey exports (pure honey)[4]								
Honey export volume	Tonnes	8,054	8,702	9,046	8,831	8,450	8,692	8,065
Honey export value (at fob[5])	Million NZ$	145	187	233	315	329	348	355
Honey export price (at fob[5])	NZ$/kg	17.99	21.45	25.77	35.62	38.92	40.04	44.02

Notes

n/a Not applicable

1 Registered beekeeping enterprises and hives under the National American Foulbrood Pest Management Plan.

2 Prices paid to beekeepers for bulk honey. The beekeepers supply the packaging (drums or intermediate bulk containers) and cover freight costs to the buyers premise. The honey prices reported in this report for each season cover the period from July to June.

3 Mānuka honey as identified by the beekeeper/supplier. The range in price is influenced by the rating on industry grading systems such as UMF®, MGO™ or equivalent. The Ministry for Primary Industries' (MPI) mānuka honey definition was finalised in December 2017.

4 New Zealand honey is mainly exported as pure honey in retail packs and in bulk. Comb honey and honeydew are also included in pure honey exports, but typically account for less than 10 percent of total export volumes.

5 fob = free on board

Source: AsureQuality Limited and Statistics New Zealand.

PRODUCTION AND FINANCIAL PERFORMANCE OF APICULTURE IN 2018/19

The profitability of many beekeeping enterprises in 2018/19 remained low, attributed to:

- on-going weak demand and low prices for non-mānuka honeys;
- low honey production in some areas; and
- honeys harvested from some mānuka stands, or honey stocks on hand that were previously regarded by beekeepers and packers as 'mānuka honey', not meeting the Ministry for Primary Industries' (MPI) mānuka honey definition, in particular the definition for monofloral mānuka honey.

Some full time beekeepers have had to return to alternative full or part-time paid employment, and several beekeeping enterprises became available for sale.

HONEY PRODUCTION

Another record honey crop in 2018/19

The 2018/19 season produced an estimated honey crop of 23,000 tonnes, an increase of 15 percent on the prior year and a new record (Tables 1 and 2). The increase in production was attributed to both an increase in the number of hives (up 4 percent to 918,026 hives) and a higher national average hive yield (up 10 percent to 25.1 kilogram per hive) compared to the prior season. However, due to seasonal factors and the ongoing change in focus of many commercial beekeepers away from maximising yield to improving financial return, hive yield was well below the 10-year average of 28.6 kilograms per hive.

Honey production in the North Island increased by 15 percent to an estimated 15,500 tonnes, driven primarily by an increase in hive yield (up 11 percent) alongside a modest increase in hive numbers (up 3 percent) (Tables 2 and 3). This boost in honey yields can be mainly attributed to good rewarewa and clover honey crops in the 2018/19 season. Beekeepers reported average to slightly below average yields from mānuka.

Beekeepers in Northland reported another below average crop with hive yields below 15 kilograms common in this region. Unfavourable weather conditions in spring, coupled with higher than normal early summer rainfall significantly reduced the number of bee flight days over the mānuka flowering period.

Cool, wet conditions in spring over several parts of the North Island reduced the number of effective foraging days during this time impacting on the spring build-up of hives, and hence the potential honey yields from early flowering crops.

Despite the generally poor spring and early summer, both the rewarewa and tawari crops did reasonably well with beekeepers harvesting these crops commenting that it was an exception to an otherwise disappointing season. These tree crops are mainly located in the Coromandel, Bay of Plenty and Waikato. The good rewarewa honey crop was also unexpected as it yielded well last season (2017/18) and it is unusual to get a good surplus in consecutive years.

Summer in western and central regions of the North Island was characterised by cool temperatures and relatively high soil moisture content. This is ideal for vegetative growth in

TABLE 2: NEW ZEALAND HONEY CROP ESTIMATES, 2010 TO 2019

YEAR ENDED 30 JUNE	2010 (tonnes)	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)	2018 (tonnes)	2019 (tonnes)	10-year average (tonnes)
North Island total	7,563	6,790	5,595	11,770	13,210	14,730	14,365	9,245	13,500	15,500	11,227
North Island yield/hive (kg)	31.3	26.4	19.5	37.7	36.4	35.0	27.7	15.2	20.1	22.3	27.2
South Island total	4,990	2,660	4,790	6,055	4,400	4,980	5,520	5,610	6,500	7,500	5,301
South Island yield/hive (kg)	36.9	20.0	35.2	43.3	30.5	32.1	33.3	30.1	31.2	33.4	32.6
New Zealand total	12,553	9,450	10,385	17,825	17,610	19,710	19,885	14,855	20,000	23,000	16,527
New Zealand yield/hive (kg)	33.3	24.2	24.6	39.4	34.7	34.2	29.1	18.7	22.7	25.1	28.6

Note
With the increasing trend of beekeepers moving hives long distances to harvest mānuka, in particular in the North Island, it is no longer feasible to provide a regional breakdown of estimates of honey production. Therefore, honey crop estimates are reported for the North Island and South Island only.
See Information about the Report for details on how the annual honey crop is estimated.
Source: AsureQuality Limited.

pasture plants but is not conducive to high nectar yields, which require the plants to be stressed.

Average to poor honey crops from mānuka stands were reported for the Gisborne and Wairoa Districts, attributed in part to cool, wet spells in early summer. The East Coast of the North Island had a dry summer with hot, dry, windy weather in January and February 2019. Significant wind events further challenged bees attempting to collect a surplus crop.

The South Island produced another good honey crop, well above volumes from the past two seasons. Honey production in the South Island increased by 15 percent for the 2018/19 season to an estimated 7,500 tonnes, driven by both an increase in hive yield (up 7 percent) and hive numbers (up 8 percent) (Tables 2 and 3). The average hive yield for the South Island continues to surpass that of the North Island at approximately 33 and 22 kilograms per hive, respectively. The difference in hive yields is due in part to a larger proportion of North Island hives targeting mānuka, which is often a lower yielding but higher income crop.

Good crops of clover and honeydew honeys were reported for the South Island for the 2018/19 season. Canterbury beekeepers had a relatively warm, dry and settled summer resulting in a particularly good season for clover and other pasture species, as well as honeydew. Beekeepers also benefited from clover being planted into a lot of new pasture which further improved nectar supply.

The West Coast of the South Island, like the western and central areas of the North Island, was affected by cool wet weather over the majority of the season resulting in average crop yields from kamahi, mānuka and rata.

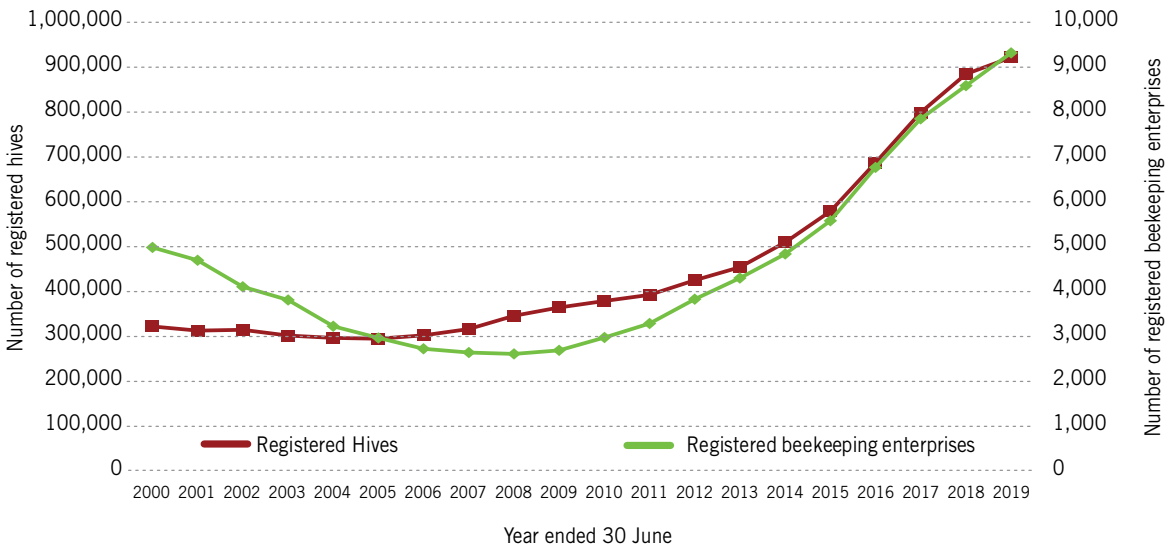
Otago and Southland beekeepers had mixed results. Parts of Southland experienced cool, wet conditions resulting in lower yields. In contrast, central Otago had drier conditions with good pollen supplies from early flowering willow setting the hives up well for the season. This progressed on to good honey yields from thyme and later from pasture species.

Growth in hive numbers slows

The beekeeping industry has experienced exceptional growth in hive numbers over the last few years but it slowed down in the 2018/2019 season. Wintering hive numbers as at 30 June 2018 were recorded at 881,185 hives. Hive splitting programmes through the spring saw an additional 36,841 registered colonies by mid-summer, increasing slightly over autumn to give a wintering total of 918,026 hives at 30 June 2019, an increase of 4 percent (Figure 1). Weaker demand and lower prices on offer for most honey types other than monofloral mānuka honey is slowing down the rate of expansion of hive numbers.

Industry feedback suggests that most of the wild mānuka stands deemed capable of producing monofloral mānuka honey are occupied in the North Island, with increasing

FIGURE 1: REGISTERED BEEKEEPING ENTERPRISES AND HIVE NUMBERS IN NEW ZEALAND[1], AS AT 30 JUNE, 2000 TO 2019



Notes

1 Registered beekeeping enterprises and hives under the National American Foulbrood Pest Management Plan. Data from 2013 to 2019 is at 30 June. Data for prior years is at early May to mid-June. Only minor differences in hive numbers are expected over the months of May and June.

Varroa was discovered in hives in New Zealand in 2000.

Source: AsureQuality Limited.

concerns being reported about over-crowding. As a result, some larger enterprises may look to opportunities in the South Island for harvesting mānuka honey.

Despite the downward pressure on honey prices, beekeeper numbers have continued to grow at only a slightly lower rate than last year, with a further 730 new registrations (9 percent increase) over the course of the season (Tables 3 and 4). The ratio of beekeeping enterprises between islands continues to move in favour of the North Island (Table 3) which accounted for 68 percent of the new registrations (498 additional enterprises) in the last year. There are 49 "mega commercial" beekeeping enterprises in New Zealand as at June 2019, similar to the previous year (Table 4).

An additional 4,166 apiaries were registered over the 2018/19 season to accommodate the additional hives (Table 3). Apiary density is a very real concern for beekeepers, landowners and other stakeholders. While there is no definitive data available on actual beehive stocking rates, it is possible that overstocking along with the unpredictable weather and other factors, contributed to the declining honey yield per hive for the North Island in the past decade (Table 2).

TABLE 3: NEW ZEALAND BEEKEEPING ENTERPRISE, APIARY AND HIVE STATISTICS[1], AS AT 30 JUNE 2019

REGION	Beekeeping enterprises	Apiaries[2]	Hives[2]
Northland/Auckland/Hauraki Plains	2,422	11,379	156,712
Waikato/King Country/Taupo	919	6,522	127,149
Coromandel/Bay of Plenty/Rotorua/Poverty Bay	1,114	8,062	151,689
Hawke's Bay/Wairarapa/Manawatu/Taranaki/Wellington	2,141	16,654	258,002
North Island	**6,596**	**42,617**	**693,552**
Marlborough/Nelson/West Coast	677	5,302	69,677
Canterbury/Kaikoura	1,207	7,132	95,473
Otago/Southland	802	4,642	59,324
South Island	**2,686**	**17,076**	**224,474**
New Zealand	**9,282**	**59,693**	**918,026**

Notes
1 Registered beekeeping enterprises, apiaries and hives under the National American Foulbrood Pest Management Plan.
2 Regional location of apiaries is at their wintering sites. The regional location of hives is based on the location of the apiaries.
Source: AsureQuality Limited.

TABLE 4: SUMMARY OF BEEKEEPING ENTERPRISES[1] BY HIVE NUMBER

AS AT 30 JUNE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
5 hives or less	1,745	2,044	2,463	2,828	3,162	3,639	4,330	4,873	5,262	5,799
6 to 50[2] hives	695	678	774	843	964	1,109	1,446	1,781	2,017	2,151
51 to 500[3] hives	319	336	351	379	443	530	662	833	911	952
501 to 1,000 hives	99	109	115	122	124	129	135	155	179	192
1001 to 3,000 hives	81	84	87	90	92	111	126	129	134	139
>3,000[4] hives	18	16	16	17	29	33	36	43	49	49
Total	**2,957**	**3,267**	**3,806**	**4,279**	**4,814**	**5,551**	**6,735**	**7,814**	**8,552**	**9,282**

Notes
1 Registered beekeeping enterprises and hives under the National American Foulbrood Pest Management Plan.
2 Beekeepers with 1-50 hives are considered hobby beekeepers.
3 Beekeepers with greater than 350 hives are considered commercial beekeepers.
4 Data for >3000 hives category between 2010 and 2013 is as at 31 March as data at 30 June is not available. Data for 2014 to 2019 is at 30 June.
Source: AsureQuality Limited.

HONEY PRICES

Average honey prices paid to New Zealand beekeepers in 2018/19 (often referred to as bulk honey prices) fell significantly for most honey types (Table 5). The honey prices reported in this report cover the period from July 2018 to June 2019. Changes or fluctuations in honey prices after June 2019 are not included.

Monofloral mānuka honey prices held whilst prices for other honey types fell

Prices for mānuka honey sold as monofloral mānuka honey that met the definition for monofloral mānuka honey, and also had a high rating according to industry grading systems such as UMF®, MGO™ or equivalent, held up during 2018/19.

Prices for multifloral mānuka honey and non-mānuka honeys decreased in 2018/19, with a price of $5.00 per kilogram noted at the lowest end of the range for both clover honey and multifloral mānuka honey (Table 5).

The industry is suffering from an over-supply of non-mānuka honeys and high inventories, hence a price correction. The record crop in 2018/19 has placed additional pressure on an already saturated market. This situation is likely to remain until export markets can be further developed to utilise this supply, including re-establishing some previous markets.

The net result is that honey prices on offer, in particular for non-mānuka honeys, are below the cost of production for many beekeeping businesses. Some beekeepers who have experience of direct selling and exporting in the past have begun direct selling again, with the aim of garnering a greater proportion of the market price.

Anecdotal reports suggest that more pasture-type honey was left on hives for winter feeding over winter 2019 than in the previous years, as beekeepers balanced the cost of extraction against savings in transport and feeding with sugar. Beekeepers are re-assessing production costs, including

TABLE 5: PRICES/RETURNS FOR APICULTURE PRODUCTS, 2013 TO 2019

YEAR ENDED 30 JUNE	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Bulk honey[1] ($ per kg)							
Light (clover type)	5.00-7.30	5.50-8.30	7.00-10.75	9.50-13.00	10.00-14.00	8.50-12.00	5.00-9.25
Light amber	5.50-8.50	4.50-8.00	7.00-9.00	9.00-11.50	6.50-13.00	7.50-10.00	4.50-9.25
Dark, including honeydew	4.50-8.50	5.50-10.00	7.00-12.50	8.00-14.50	8.00-16.00	5.00-8.50	3.50-6.00
Mānuka[2]	10.45-60.00	8.00-85.00	9.50-116.50	12.00-148.00	10.80-127.00	12.00-135.00	5.00- 125.00
Beeswax[3] ($ per kg)							
Light	7.50-8.50	8.00-10.50	9.00-12.50	11.00-15.00	12.00-17.00	16.00-17.00	10.00-17.00
Dark	6.50-7.80	6.50-7.80	8.00-10.00	9.00-10.00	12.00-17.00	15.00-16.00	12.00-20.00
Pollen[3] ($ per kg)							
Not dried or cleaned	16.00-30.50	16.00-30.50	16.00-27.00	16.00-25.00	16.00-25.00	16.00-25.00	16.00-25.00
Cleaned and dried	40-00-45.00	40.00-45.00	40.00-46.00	...	...	...	...
Pollination[4] ($ per hive)							
Pipfruit, stonefruit and berryfruit	60-120	60-120	60-140	60-150	70-180	80-200	95-250
Kiwifruit							
– Hawke's Bay	120-180	120-185	120-180	165-300	200-300	190-300	190-300
– Auckland	120-150	120-150	120-150	150-400	150-400	180-400	180-400
– Bay of Plenty	120-195	140-210	142-195	145-400	150-400	175-400	185-400
– Nelson	120-150	120-150	115-195	178-190	130-190	150-200	150-200
Canola and small seeds (carrots)	150-195	150-195	150-195	130-200	200-250	200-250	100-250
Live Bees[3]							
Bulk bees for export ($ per 1kg package)	27-29	27-32	28-32	31-35	31-35	31-35	32
Queen bees (per queen) local sales ($)	33-37	33-37	30-37	35-60	14-80[5]	20-80[5]	14-75[5]

Notes

... Data not available.

All prices are exclusive of GST.

1 Prices paid to beekeepers for bulk honey. The beekeepers supply the packaging (drums or intermediate bulk containers) and cover freight costs to the buyers premise.

2 Mānuka honey as identified by the beekeeper/supplier. The range in price is influenced by the rating on industry grading systems such as UMF®, MGO™ or equivalent. The Ministry for Primary Industries' (MPI) definition for monofloral and multifloral mānuka honey was finalised in December 2017.

3 Prices paid to beekeepers. The beekeepers cover the freight costs to the buyers premise.

4 Prices paid to beekeepers. Prices at the lower end of the range are for hives delivered to depot sites. Upper end prices include delivery into the orchard and sugar for 3 to 4 one-two litre feeds to stimulate the bees to collect pollen. Higher prices were also demanded for hives placed in orchards (in particular kiwifruit orchards) under netting.

5 Queen bee prices includes the price of virgin queens in the price range.

Source: AsureQuality Limited.

beekeepers targeting mānuka honey. Mānuka stands under review include those less likely to produce monofloral mānuka honey, or where there is overcrowding.

OTHER REVENUE SOURCES

Pollination services

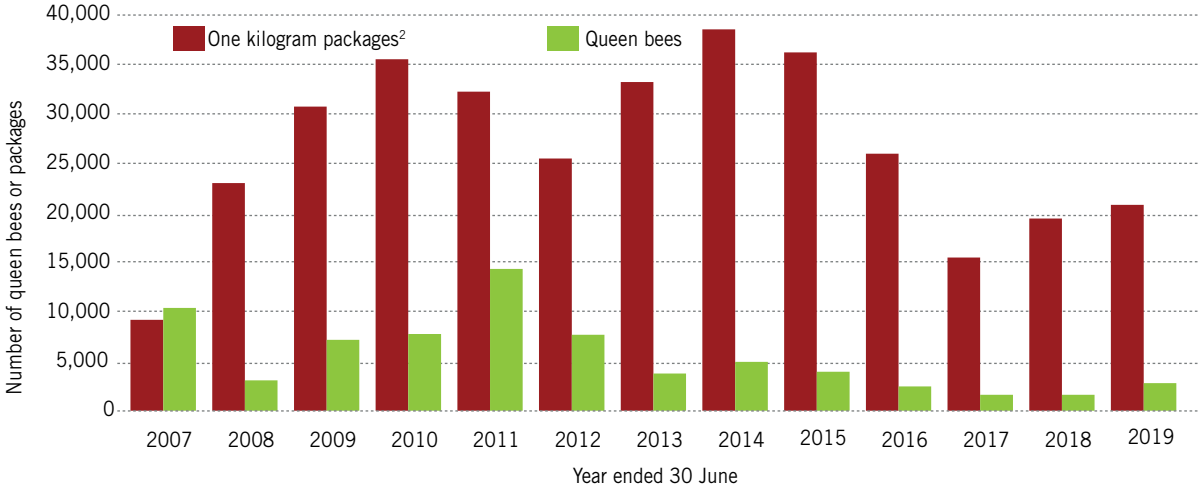
Demand for pollination services continues to increase with ongoing expansion in several horticulture sectors including apples, avocados, kiwifruit, cherries and blueberries. Prices per hive in 2018/19 remained similar to the prior year apart from some price increases for covered cherry crops. Paid pollination services could see an increasing supply of hives in coming years as some beekeepers look to diversify their income stream in the wake of lower honey prices.

Live bee exports

Live bee exports from New Zealand continued their slow recovery with 20,361 one-kilogram packages sent to Canada in the autumn of 2019 (Canadian spring), up 7 percent on last year (Figure 2). It is unlikely that live bee exports will achieve the levels of 30,000 to 35,000 one-kilogram packages between 2009 and 2015, until world honey prices improve. Exports of queen bees increased by 74 percent to 2,730 individual bees in 2018/19.

In contrast, bumblebee shipments to the Maldives reduced to 4,800 in 2018/19, down from 11,800 last season. This is likely due to the exporter reducing the volume of bumblebees sent in each consignment without a corresponding increase in the number of consignments. Export consignment sizes were reduced due to challenges with flight logistics. Bumblebees are mainly used to pollinate crops grown in greenhouses.

FIGURE 2: NEW ZEALAND EXPORTS OF LIVE BEES[1], 2007 TO 2019



Notes
1 Honey bees only. A small but increasing number of bumblebees are also exported.
2 A package of bees generally consists of 1 kilogram of bees housed within a ventilated cardboard tube or a cardboard and wire screen box about the size of a shoe box. The package may hold a supply of sugar syrup and a queen bee in a cage. All packages and the majority of the queen bees go to Canada. The exporting season is late February to May.
Source: AsureQuality Limited.

TABLE 6: NEW ZEALAND EXPORTS OF BEESWAX, 2007 TO 2019

YEAR ENDED 30 JUNE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Export volume (tonnes)	178	106	139	138	160	169	180	148	118	27	24	7	18
Export value ($ million fob[1])	1.40	1.01	1.36	1.21	1.45	1.59	1.85	1.71	1.57	0.46	0.51	0.14	0.41

Note
1 Free on board.
Source: Statistics New Zealand.

Propolis

Propolis is a resin collected by bees from some tree species and marketed as a dietary supplement.

Beekeepers gather propolis off special mats placed in hives or by scraping boxes and frames. Propolis in this form is regarded as raw propolis as it contains some beeswax (the proportion varies throughout the season) as well as other contaminants such as parts of bees. Pure propolis is the processed product that has been separated from beeswax and other contaminants.

The recovery rate of pure propolis from raw propolis is approximately 37 to 47 percent early in the season. This decreases to 15 to 25 percent recovery when the nectar flow is on as bees add more wax to the propolis when honey is being produced. Beekeepers reported receiving similar prices in 2018/19 to last season for the raw unprocessed product ($54 to $197 per kilogram depending upon likely recovery rate), with quotes of up to $380 for the pure product.

While the demand for propolis products on the international market remains strong, particularly in Asian markets, some New Zealand exporters are sourcing propolis from other countries for direct supply to market. This may reduce local demand (and possibly the price offered) in the coming seasons.

Royal jelly and beeswax

Royal jelly is a substance secreted by the bees and fed to the developing queen larvae. Royal jelly is collected by beekeepers, typically via dedicated hives, and marketed as a health supplement. Royal jelly processing facilities decided not to operate in 2018/19 due to a surplus of stock.

The domestic demand for foundation wax or wax for coating plastic frames declined due to large numbers of frames in storage and a decline in disposable income amongst several beekeepers. The supply of beeswax, while stable overall, is at much lower levels per hive than was the case historically. This has occurred due to changes in the honey extraction processes via the foregoing of uncappers in favour of prickers which reduces the amount of wax removed from the frames during the extraction process. Additionally, beekeepers are less inclined to recover and process wax from their own operation via scraping top bars, etc. as this requires investment in time and machinery better utilised in other parts of the business.

Export volumes of beeswax in the year to 30 June 2019 increased from 7 to 18 tonnes (Table 6). Export prices for beeswax increased in 2018/19 to $23.15 per kilogram, up from $21.20 last season.

Sale of bee colonies and hives to other beekeepers

Despite increasing hive numbers, prices paid for bee colonies dropped this season due to a decline in demand for whole hives (Table 7). Peak prices of $850 per hive have been reported, down from $1,000 per hive last year, likely influenced by reduced profitability from lower honey prices.

Typically, beekeepers buy nucleus colonies (nucs) that generally consist of five frames of bees and three frames of brood and a laying queen, or single box hives that consist of eight to ten frames of bees and six frames of brood with a laying queen. Prices dropped significantly in 2018/19, and units ranged in price from $140 to $380 with the higher prices received earlier in the season. Much of the increase in hive numbers in 2018/19 was related to beekeepers splitting existing stock rather than buying new hives.

HONEY EXPORTS

New Zealand honey exports maintained good prices

New Zealand exports of pure honey[1] in the year to 30 June 2019 totalled 8,065 tonnes, down 7 percent from last year (Table 1). Revenue was up by 2 percent on the previous year to $355 million despite the fall in export volume, driven by a higher average export price (up by 10 percent).

The United Kingdom displaced the United States as the largest destination for New Zealand honey exports in the year to June 2019, with an increase in export volume of 12 percent to 1,622 tonnes (Figure 3). Exports to the United States dropped by 44 percent to 1,047 tonnes, making the US the fourth largest export destination for New Zealand honey behind the UK, China and Australia.

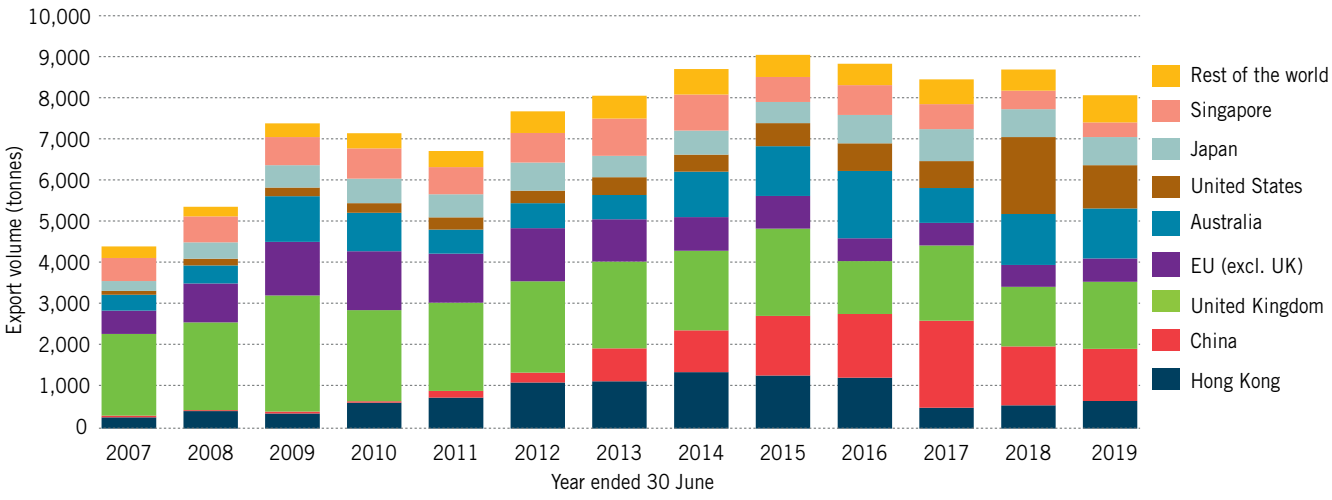
Bulk honey exports (honey in drums) almost doubled in the year to June 2019 to 1,733 tonnes, up from 892 tonnes in the prior year. This translates into an increase in the proportion of honey exported in bulk from 10 percent to 21 percent, a similar magnitude to five years ago (Figures 4 and 5). The United Kingdom and Japan were the top destinations for New Zealand bulk honey exports in 2018/19, accounting for 38 percent and 11 percent, respectively. Bulk honey exports to Canada, China and Australia, previously small markets, also increased (Figure 5).

The increase in bulk honey exports in 2018/19 may be a reflection of beekeepers looking for alternative sales channels as a result of reducing demand for bulk honey by New Zealand based packers. Exporting honey in bulk also gives increased packaging flexibility.

New Zealand honey exports by honey type – July to December 2019

New export codes were introduced from 1 July 2018 to capture honey exports by three floral types: monofloral mānuka, multifloral mānuka, and non-mānuka honeys. A review of the new codes in early to mid-2019 indicated that industry needed more assistance with implementation. Now that more assistance has been provided, the data is deemed to be more reliable, particularly since the beginning of July 2019. Therefore, it is feasible to explore the data for honey exports by honey type at a more detailed level for the six-month period from 1 July 2019 to 31 December 2019.

FIGURE 3: NEW ZEALAND PURE HONEY[1] EXPORTS BY DESTINATION, 2007 TO 2019



Note
1 New Zealand honey is mainly exported as pure honey in retail packs and in bulk. Comb honey and honeydew are also included in pure honey exports, but typically account for less than 10 percent of total export volumes. The data shown is for pure honey exports only.
Source: Statistics New Zealand.

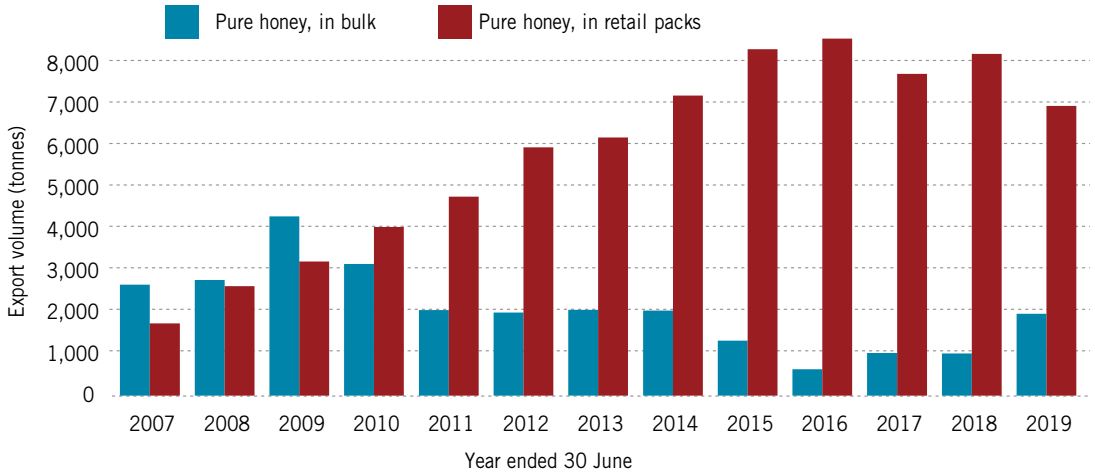
New Zealand exported 4,587 tonnes of honey in the six month period between July and December 2019. Around half of this honey (2,166 tonnes) was monofloral mānuka honey in retail packs (Figure 6). Total bulk honey exports for the six months to December 2019 was 805 tonnes (Figure 6), and the key export markets were the United Kingdom (40 percent), China (14 percent), and Germany (11 percent).

The United States was the top export market for monofloral mānuka honey, followed by China and Japan (Figure 7). The top markets for multifloral mānuka honey were the United Kingdom, China and Australia. China took almost 40 percent of the non-mānuka honey exported in the six month period.

The average export price for all honey for the period July to December 2019 was $40.62 per kilogram. For the first time, data is now available for honey export prices by floral type (Figure 8). The average export prices (NZ$ per kilogram) for honey by floral type were:

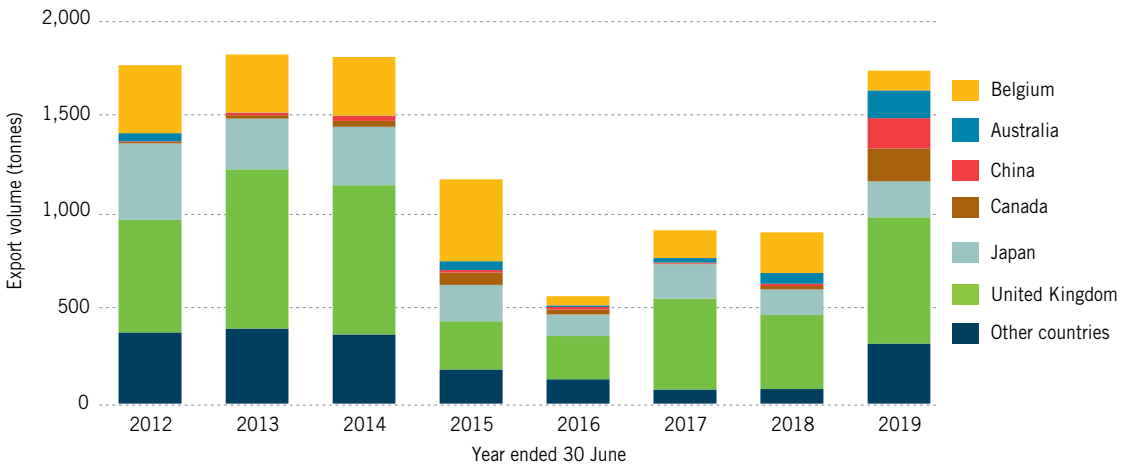
- $54.67 for monofloral mānuka honey
- $29.57 for multifloral mānuka honey
- $20.46 for non-mānuka honey.

FIGURE 4: NEW ZEALAND PURE HONEY[1] EXPORTS BY PRODUCT TYPE (EXTRACTED HONEY), 2007 TO 2019



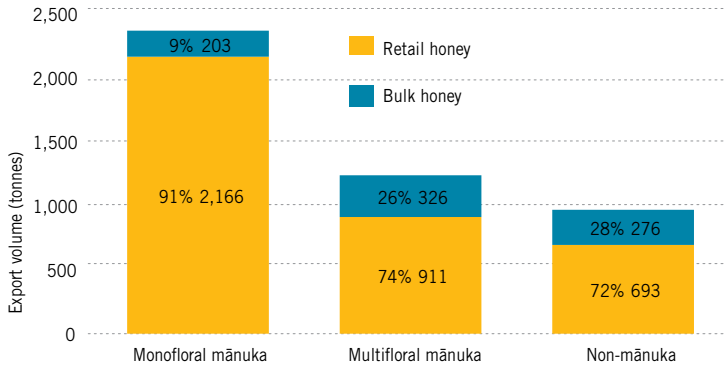
Note
1 New Zealand honey is mainly exported as pure honey in retail packs and in bulk. Comb honey and honeydew are also included in pure honey exports, but typically account for less than 10 percent of total export volumes. The data shown is for pure honey exports in retail packs and in bulk.
Source: Statistics New Zealand.

FIGURE 5: NEW ZEALAND BULK PURE HONEY[1] EXPORTS BY DESTINATION, 2012 TO 2019



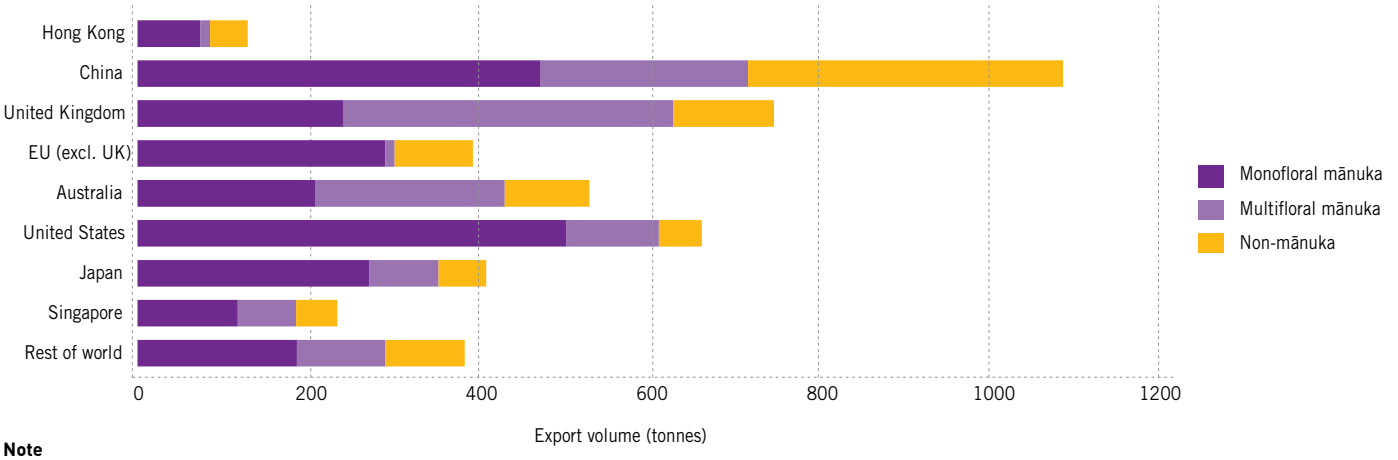
Note
1 The data shown is for pure honey exports, exported in bulk.
Source: Statistics New Zealand.

FIGURE 6: NEW ZEALAND PURE HONEY[1] EXPORTS BY FLORAL AND PACKAGING TYPE, JULY TO DECEMBER 2019



Note
1 New Zealand honey is mainly exported as pure honey in retail packs and in bulk. Comb honey and honeydew are also included in pure honey exports, but these honeys are not categorised by floral type.
Source: Statistics New Zealand.

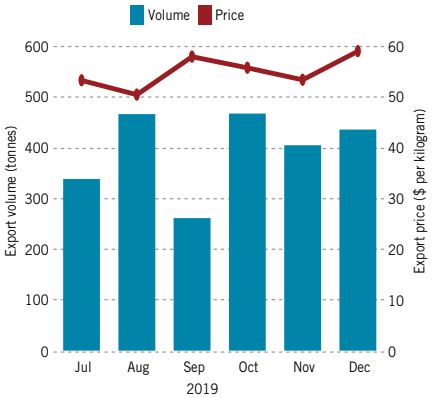
FIGURE 7: NEW ZEALAND PURE HONEY[1] EXPORTS BY FLORAL TYPE BY DESTINATION, JULY TO DECEMBER 2019



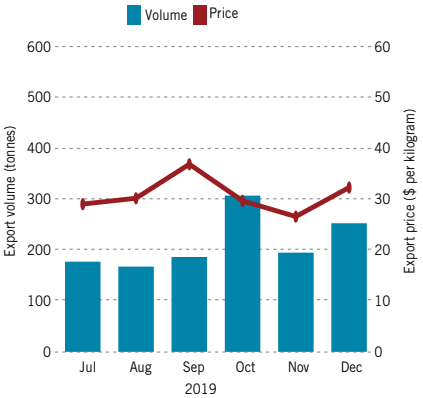
Note
1 New Zealand honey is mainly exported as pure honey in retail packs and in bulk. Comb honey and honeydew are also included in pure honey exports, but these honeys are not categorised by floral type.
Source: Statistics New Zealand.

FIGURE 8: NEW ZEALAND MONTHLY PURE[1] HONEY EXPORT VOLUMES AND PRICES BY HONEY TYPE, JULY TO DECEMBER 2019

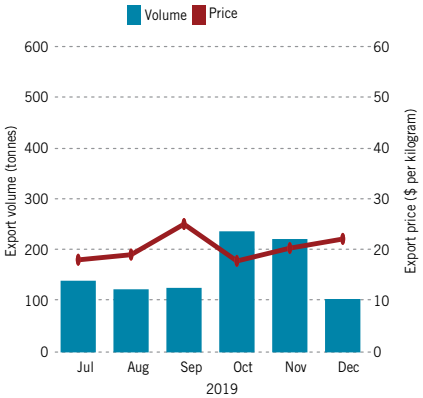
Monofloral mānuka honey



Multifloral mānuka honey



Non-mānuka honey



Note
1 New Zealand honey is mainly exported as pure honey in retail packs and in bulk. Comb honey and honeydew are also included in pure honey exports, but these honeys are not categorised by floral type.
Source: Statistics New Zealand.

OPERATING COSTS (TABLE 7)

With the sharp decline in honey prices leading to lower revenue for most beekeeping businesses, owners and managers are actively looking at opportunities to reduce expenses. While there are some areas where savings can be made reasonably easily, in others it means fundamental changes to the way businesses are operated.

Sugar

Beekeepers paid between $730 and $1,500 per tonne dry weight for sugar in 2018/19. The large ranges in prices is influenced by the volume of sugar purchased, and whether the sugar syrup is inverted sugar syrup[2] or not. Sugar remains a significant cost to commercial beekeeping businesses and, with the density of hives in some areas placing pressure on wintering sites, is not an area where savings can easily be made, short of leaving honey on the hives.

Beekeepers typically buy sugar in a ready mixed liquid form to avoid purchasing the equipment required to mix large batches, and to allow their beekeeping staff to focus on the core business of hive and crop management. Beekeepers continue to exercise caution around the use of sugar in beehives as many export markets routinely test for sugar adulteration in honey.

Fuel

While many beekeepers are reassessing the profitability of remote sites, with some abandoning those where servicing cost are particularly high, fuel remains a major expense. Fortunately, many beekeeping enterprises are operating a relatively young, fuel efficient vehicle fleet, attributed to a run of profitable years prior to the fall in honey prices in 2018.

Labour

The downturn in profitability has impacted owners and workers. Some beekeepers, in particular in the small commercial category[3], have been forced to return to full time employment, in particular in the construction and related industries, turning their beekeeping business into a part time job, as it can no longer support a full time owner-operator. There have also been reports of staff redundancies and/or seasonal contracts not being renewed, whilst some beekeeping businesses have had to refinance in order to pay wages and retain staff.

Site rentals

The average price paid for apiary site rentals remained stable for mānuka sites over the 2018/19 season, but came down for sites deemed capable of only producing multifloral mānuka honey. This is despite competition for sites increasing in intensity, in particular in the North Island.

Laboratory testing costs

Laboratory testing of honey is emerging as a significant cost for beekeeping businesses. Many beekeepers that sell honey destined for markets that require official assurance for export eligibility need to pay for tests to be performed at a recognised laboratory. The most common and required tests are for (i) the detection and quantification of the level of tutin in honey, and (ii) the confirmation of honey as monofloral or multifloral mānuka honey, or non-mānuka honey. Other tests routinely undertaken are to determine C4 sugar concentrations and tests for glyphosate levels, and in addition for mānuka honey, industry grading systems such as UMF®, MGO™ or equivalent.

2 Inverted or invert sugar is a mixture of glucose and fructose. Invert sugar is usually fed to bees as a syrup, based on the understanding that simple sugars (glucose and fructose) are easier for bees to digest than more complex sugars such as sucrose.

3 The small commercial beekeeper category are typically single beekeeper operations, without any full time staff. The number of hives managed ranges from 250 to 800 hives.

TABLE 7: ESTIMATED EXPENDITURE FOR BEEKEEPING OPERATIONS[1], 2015 TO 2019

YEAR ENDED 30 JUNE			2014/15	2015/16	2016/17	2017/18	2018/19
Labour	Worker[2]	$ per hour	16-33	16-35	16-36	17-35	21-28
	Manager	$ per hour	28-75	30-75	30-75	30-75	30-75
	Average working week	hours	45	45	45	45	45
	Average ratio of hives per fulltime equivalent (FTE) with varroa present in the hives	hives:FTE (pre-varroa)	350:1 (800:1)	350:1 (800:1)	350:1 (800:1)	350:1 (800:1)	350:1 (800:1)
Fuel	Fuel (dependant on world price and exchange rate)			Variable			
Sugar	Bulk sugar (variable depending on overseas prices and NZ exchange rate)	$ per tonne	758-1,044	789-1,009	960-1,400	800-1,400	730- 1,500
Varroa treatment	Varroa treatment (variable according to hive strength and product(s) used)	$ per hive	22-35	27-31	27-34	17-44	15-18
	Varroa strips (applied at recommended rates, two treatments per year)	$ per 1000 plus strips	22-35	23-25	23-27	23-29	23-29
Protein supplements	Hives may require 1–2 kilograms per year	$ per 20 kilogram bag	155-163	162-182	160-182	157-209	195 - 209
Contract extraction costs	Extraction of mānuka honey (costs more as the frames must be pricked first to release the honey)	$ per frame	1.06-2.25	1.20-2.25	1.50-2.25	1.50-2.50	1.50
	Extraction of clover honey	$ per frame	0.60-1.50	0.60-1.50	1.00-1.50	1.10-1.50	1.10 - 1.50
Hives	Perfect condition hive, includes 2 brood boxes, floor, lid and 1 honey super, no bees, assembled and paraffin waxed	$ per hive	226	201	217-235	210-350	230-330
	Reasonable condition hive, includes 2 brood boxes and 1-4 honey boxes with bees (including valuations as part of business sale)	$ per hive	600-1,000	780-2,000	700-1,500	1,000-2,000	500-800
	Reasonable condition single brood nest hive (no supers)	$ per hive	300-400	560-800	400-600	300-600	390-420
	4-5 Frame nucleus hive; new hives includes nuclei box	$ per hive	150-260	200-300	275-300	100-350	180-315
	Repairs and maintenance, 7% of hive purchase price	$ per hive	28-42	28-42	28-42	30-44	30-45
	Wax to coat plastic frames	$ per kilogram	14-16	...	...	...	...
	Hive Strappers, used as required	$ per unit	7-11	8-12	6-13	6-14	7-12
Bees	Queen bees	$ per bee	30-65	30-40	14-80	20-80	14-75
	Select breeder queens	$ per bee	1,000-1,638	900-1,700	600-2,000	3,000-5,000	...
Protective clothing		$ per suit	139-189	137-169	138-189	159-217	124-229
Honey drums	New or re-manufactured honey drum (holds approximately 300kg of honey)	$ per drum	79-100	60-79	64-100	65-100	75
Apiary rentals paid to landowners	Mānuka sites (rental is paid either as a per hive rate, percentage of crop when sold or a combination of both)	$ per hive	50-130	75-150	50-250	50-400	50-250
		$ per apiary	500-1,000	500-1,000	500-1,000	500-1,400	500-1,400
		% of crop	10-30	10-45	10-45	10-45	20-30
		$ per hive + % of crop	$25-60 10-38%	$60-100 10-40%	$50-100 10-40%	$50-150 10-40%	$50-150 10-40%
	Non-Mānuka sites	grams per hive		Variable, often 500			
Compliance costs	Risk Management Programme (RMP) annual audit costs	$ per audit for a processing RMP	up to 1,350	up to 1,400	up to 1,500	up to 1,600	up to 1,725
		$ per audit for a storage RMP	up to 795	up to 895	up to 1,000	up to 1,000	up to 1,200
	MPI Food Safety annual fees	$ if require export eligibility	590	...	1,005.70	1,005.70	1,005.70
	MPI Beekeeper Listing	$ application fee	n/a	n/a	135.00	135.00	135.00
		$ renewal fee	n/a	n/a	77.50	77.50	77.50
	Auditing of electronic certificates	$ per eligible document	up to 67	up to 70	up to 70	up to 70	up to 75
		$ per month auditing 10% of eligibility declarations raised	up to 67	up to 70	up to 70	up to 70	up to 75
	Tutin tests	$ per sample (first sample)	90-125	80-125	80	60-90	60-90
		$ per composite (up to 10 samples can be composited)	10-15	10-15	10	15-17	22
	American Foulbrood Pest Management Plan Levy	$ per beekeeper	20	20	20	20	20
		$ per apiary	14	14	15.17	15.17	15.17
Apiculture New Zealand	Non-Commercial (1-25 hives)	Annual subscription	n/a	86.25	86.25	86.25	86.25 or 115.00
	Commercial (26+ hives)	Base fee	n/a	172.50	172.50	172.50	172.50
		$ per hive	n/a	1.15	1.15	1.15	1.15
	Beekeeping Clubs	Annual subscription	n/a	230	230	230	230
	Packers and Processors	Base fee	n/a	172.50	172.50	172.50	172.50
		$ per kilogram of production	n/a	0.0345	0.0345	0.0345	0.0345
	Health Product & Food Manufacturers	Base fee	n/a	172.50	172.50	172.50	172.50
		$ per kilogram of production	n/a	0.115	0.115	0.115	0.115
	Affiliate Industry (e.g: supply companies etc)	Annual subscription	n/a	460	460	460	460

Notes
... Data not available.
n/a Not applicable.
1 Expenses are exclusive of GST.
2 The highest hourly rates for workers will involve supervisory and some management responsibilities.

Source: AsureQuality Limited.

TABLE 8: MPI-FUNDED APICULTURE AND HONEY PROJECTS

HIGH-PERFORMANCE MĀNUKA PLANTATIONS (ended 30 September 2018; Final Report available)
This Primary Growth Partnership Programme led by Mānuka Research Partnership (NZ) Limited aims to move mānuka honey production for medical use from wild harvest to science-based farming of mānuka plantations. Combining improved genetics with optimum husbandry practices could enable significant gains for New Zealand's mānuka honey industry.
https://www.mpi.govt.nz/funding-and-programmes/sustainable-food-and-fibre-futures/primary-growth-partnership/completed-pgp-programmes/high-performance-manuka-plantations/

VARROA ELIMINATION UNITS
The parasitic mite Varroa destructor has caused significant damage to New Zealand's honey production since 2000. The mite infestation in hives severely impacts the health of honey bees. This eventually leads to the loss of honey bee colonies. Conventional chemical treatment involves placing miticide strips into the hive (miticide is insecticide for mites). However, strips do not deliver consistent and adequate dosage throughout the hive and their effectiveness is impacted by various factors e.g. wind, venting, temperature, humidity and other factors. The purpose of this project is to design, build and test a number of prototype Varroa elimination units (VEU). The VEU is a new device that is placed into the hive. It measures the amount of miticide circulating within the hive (using sensors) and automatically releases an appropriate dosage to ensure that a suitable level of miticide remains continuously within the hive.
https://www.agriculture.govt.nz/funding-and-programmes/sustainable-food-and-fibre-futures/current-sff-futures-projects/

OPPORTUNITIES OF SHELTERBELTS IN FARMING SYSTEMS (in progress)
This project will investigate the benefits, opportunities and challenges of shelterbelts in pastoral systems and support their further adaptation.

TREES FOR BEES: BUILDING BEE CAPACITY FOR SUSTAINABLE RURAL GROWTH (in progress)
Building bee capacity by training people to plant for bees, enabling nurseries to supply bee plants and providing tools to design bee plantations.
http://www.treesforbeesnz.org/home

SUSTAINABLE FOOD AND FIBRE FUTURES
(includes existing and recently completed projects set up under the Primary Growth Partnership and Sustainable Farming Fund)

TREES FOR BEES: STRATEGIC BEE PLANTATIONS FOR POLLINATION AND HONEY (completed September 2019)
The aim of this project is to support the development of the wider agricultural sector to achieve sustainability and growth targets, through increased honey and related medical product exports, and by improved pasture, horticulture and arable crop pollination helping drive growth. This will be achieved by having healthy and thriving bee populations through focussed research on floral pollen and nectar sources that meet bee nutrition requirements at the right time and in sufficient quantity, and strategic bee plantations that enable apiarists, farmers and landowners to ensure year-round bee feed supplies. These outcomes will be delivered through demonstration farms, workshops and field days and employ a suite of extension tools developed during the project.
http://www.treesforbeesnz.org/home

TREES FOR BEES: PRODUCING ABUNDANT BEE POLLINATORS FOR SUSTAINABLE FARMING (completed February 2017)
This project aims to increase the number of strong, healthy honey bees to ensure pollination services for agricultural crops. In many areas, pollen and nectar sources are being removed leading to poor nutrition for bees. They become weakened, malnourished and sometimes starving. To restore flowers for bees we are installing demonstration plantations of trees and shrubs to show how to supply a steady source of high-protein pollen to support bee colonies. The result will be more bees for pollination services leading to increased crop and pasture yields.
http://www.treesforbeesnz.org/home

ABATE: ACTIVE BACTERIOPHAGES FOR AFB ERADICATION (in progress)
American Foulbrood (AFB) is caused by a bacterial pathogen of honeybees, Paenibacillus larvae. Antibiotics use in hives is prohibited in New Zealand and hives with signs of infection must be destroyed immediately. Bacteriophages (phages for short) are simple viruses that kill specific bacteria. They are highly abundant, estimated at 1031 globally. Previous work abroad indicates that our AFB pathogens in New Zealand are susceptible to destruction by a set of specific bacteriophages that thrive in healthy hives and nearby soil. We will isolate native New Zealand phages for P. larvae. These will be completely sequenced to determine if they are safe for use and can be combined to produce a bio-protective phage cocktail for field testing. This project provides the groundwork study for an innovative approach to naturally protecting NZ beehives against AFB.
https://www.massey.ac.nz/massey/about-massey/news/article.cfm?mnarticle_uuid=07931996-67EA-45BF-82FE-7587F3608127

PROJECT CLEAN HIVE (in progress)
American foulbrood (AFB) is a notifiable disease of the New Zealand honey industry. As the industry is expanding exponentially, both through commercial businesses and hobbyists, increasing incidence of AFB is a growing risk. Otago and Southland beekeepers have identified the opportunity available to them to pilot some innovative solutions. This project will run a pilot study to test whether the current testing methods can be calibrated with the proposed new tests (qPCR and detection dogs) to provide cost effective tools for detection and management of AFB at the pre-clinical stage. If successful, this will provide new opportunities for improved disease identification and control of AFB to help prevent the impact and spread of a notifiable disease. The pilot study outcomes and the lessons learned will be shared with the wider industry.

COMBATING THE GIANT WILLOW APHID (completed July 2019)
Willows are highly valued in New Zealand as early season nectar and pollen sources critical to the spring growth of honeybee colonies, and for soil erosion control and riverbank stabilisation. The giant willow aphid (GWA), an invasive exotic species first reported in New Zealand in December 2013, is now found throughout New Zealand and is causing a cascading series of impacts. Infestation causes tree stress that reduces willow health and productivity. Aphids secrete large quantities of honeydew, rich in melezitose sugar that is readily collected by bees and introduced vespulid wasps. Melezitose-enriched honey crystallises within the hive, resulting in a significant volume of honey being either rendered non-extractable or tainted by the melezitose. This programme responds to an urgent widespread need from various industry groups by tackling three areas: 1) the economic impact of GWA, 2) identifying GWA resistant willow cultivars, and 3) determining options for biological control of GWA.

ALTERNATIVE POLLINATORS FOR SEED PRODUCTION (in progress)
This project aims to develop managed fly species that can be mass reared to provide sufficient and predictable pollination to a range of field and covered crops to maximise economic yields.

CLASSICAL BIOLOGICAL CONTROL FOR *VESPULA* WASPS – Phase II (in progress)
Vespula wasps are a serious invasive pest throughout New Zealand, causing direct economic losses and putting labourers at risk in various primary sectors. Biocontrol can offer a sustainable large-scale long-term control solution to complement current and future methods. This project will explore the potential of natural enemies, import the proposed parasitic flies, test their safety, apply to the EPA for release approvals and if approved, make initial releases.
http://www.landcareresearch.co.nz/science/plants-animals-fungi/animals/invertebrates/invasive-invertebrates/wasps/wasp-biocontrol-updates

A COLLABORATIVE INDUSTRY APPROACH TO REDUCE THE THREAT OF PAs IN HONEY Phase 2: Risk modelling and mitigation in the supply chain (in progress)
The presence of pyrrolizidine alkaloids (PAs) in honey represents a food safety and market access threat. Building on a previous Sustainable Farming Fund project, this project will identify mitigation strategies and a potential testing regime that is appropriate for the industry to continue to grow its international presence and position. A proactive response and industry self-regulation will ensure that New Zealand honey is positioned to meet any future national and international regulations related to PAs and that market access is not limited, and that the public perception of New Zealand honey continues to be 'honey is healthy for you'.

OTHER MPI FUNDED PROJECTS

ON-GOING RESEARCH ON THE MĀNUKA HONEY DEFINITION
New Zealand Food Safety continues to work collaboratively with stakeholders within the Apiculture Industry with regards to mānuka honey. Several projects funded through MPI's Operational Research Programme are underway, aimed at ensuring the regulatory definition for mānuka honey remains fit for purpose. The first study aims to improve our understanding of the influence sampling techniques may have on obtaining representative test results for the attributes in the mānuka honey definition. The outputs will be used to provide clearer guidance for the honey industry when taking samples of honey for testing to meet the definition. The study will finish by April 2020. Of particular note is the pilot project to establish a national honey reference collection. New Zealand Food Safety is now in the second year of collecting honey samples and this is a continuation of a pilot trial conducted in 2018/19 which tested initial protocols. The second year will build on the lessons learned from the pilot trial. Industry has provided valuable input to these projects in the design phase.

APIWELLBEING PROJECT
The ApiWellbeing project is a continuation of the Bee Pathogen Programme (see below), and is funded by MPI's Operational Research Programme and supported by the Management Agency for the National American Foulbrood Pest Management Plan. The work increases our efforts in understanding the health of New Zealand honey bees, targeting both exotic and endemic diseases and pests. Work areas include (1) developing new molecular tests for both endemic and exotic pathogens; (2) sequencing the genomes of Paenibacillus larvae (the bacteria that causes American foulbrood disease) to better understand genetic diversity and understand disease-types and how clusters of disease may be linked; (3) creating an array of online resources and guidelines to enhance bee biosecurity; and (4) establish a national collection of bees and data for further research opportunities.
https://www.biosecurity.govt.nz/protection-and-response/readiness/bee-biosecurity/apiwellbeing/

BEE PATHOGEN PROGRAMME (completed)
The Bee Pathogen Programme is the most detailed cohort study ever conducted in New Zealand, funded by Operational Research Funds by the Ministry for Primary Industries. The same 60 apiaries were followed from September 2016 to March 2019. This programme is discovering (i) how common pests and diseases are in New Zealand apiaries using international best practice sampling and analysis protocols, (ii) new evidence-based protocols for sampling and testing pests and diseases in New Zealand honey bees, (iii) how apiary management is affecting varroa mite counts, trypanosome infection levels, AFB incidence, and the prevalence of Nosemas and viruses in New Zealand apiaries, and (iv) the relative influence of these pathogens on hive productivity and colony survival.
https://www.biosecurity.govt.nz/protection-and-response/readiness/bee-biosecurity/bee-pathogen-programme/

NEW ZEALAND COLONY LOSS SURVEY 2015 (completed)
Funded by the National Beekeepers Association of New Zealand, Federated Farmers Bee Industry Group, Agcarm and the Ministry for Primary Industries.
https://www.mpi.govt.nz/protection-and-response/readiness/bee-biosecurity/bee-colony-loss-survey/

NEW ZEALAND COLONY LOSS SURVEY 2016 and 2017 (completed)
A continuation of the 2015 New Zealand Colony Loss Survey (see above) and funded by the Ministry for Primary Industries. Specifically addresses the differences between regional rates of colony losses.
https://www.mpi.govt.nz/protection-and-response/readiness/bee-biosecurity/bee-colony-loss-survey/

NEW ZEALAND COLONY LOSS SURVEY 2018 and 2019 (completed)
A continuation of the 2015, 2016 and 2017 New Zealand Colony Loss Survey (see above) and funded by the Ministry for Primary Industries. Specifically addresses the presence of any statistically significant trends in colony losses over the five years to date.
https://www.mpi.govt.nz/protection-and-response/readiness/bee-biosecurity/bee-colony-loss-survey/

INFORMATION ABOUT THE REPORT

This report was developed from information gathered through surveys completed by beekeepers, honey packers and exporters and augmented with a review of export documents, published reports and publically available data from Statistics New Zealand.

Aggregated data on the number of registered beekeeping enterprises, apiaries and hives under the National American Foulbood Pest Management Plan are reported with the permission of the Management Agency for the National American Foulbrood Pest Management Plan.

Honey production, price and expenses figures are based on a survey of a range of beekeeping enterprises that account for approximately 30 percent of registered hives in New Zealand. The survey is administered by AsureQuality Limited during their annual Risk Management Programme audits and/or hive audits, and via targeted interviews.

Surveys record honey crop information based on the beekeeper enterprise location, not apiary (or hive) locations. This means that honey production information is recorded against where the honey is extracted, not harvested. Therefore, with an increasing trend of migrating hives long distances to harvest mānuka, in particular in the North Island, honey production is being reported for the North Island and South Island only.

The data recorded in the surveys are extrapolated to provide an estimate of national honey production, price ranges for honey and honey products, and expenses for beekeeping operations.

For more information please contact
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Photos: Thanks to Dr Richard Hall for providing photos on pages 1,4 and 9.

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